t15_trees_a (TMLRX-UoFRjm8xxWXAsAEyrAPexq1jWWtVoW)

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Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v3\_trees\_2 : \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k7\_trees\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_trees\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_trees\_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finseq\_1\ X1))) \Rightarrow ((r1\_tarski\ X0\ X1) \Leftrightarrow (\exists X2.((v1\_relat\_1\ X2) \wedge ((v1\_funct\_1\ X2) \wedge (v1\_finseq\_1\ X2))) \wedge (X1 = k7\_finseq\_1\ X0\ X2)))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1\ X0\ X1) \tag{2}$$

Assume the following.

$$\forall X0.(m2\_finseq\_1\ X0\ k5\_numbers) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v3\_trees\_2\ X1))) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge ((v1\_funct\_1\ X2) \wedge (v3\_trees\_2\ X2))) \Rightarrow ((X0 \in k9\_xtuple\_0\ X1) \Rightarrow (\forall X3.(m2\_finseq\_1\ X3\ k5\_numbers) \Rightarrow (\neg(X3 \in k9\_xtuple\_0\ (k7\_trees\_2\ X1\ X0\ X2)) \wedge ((\neg(\neg r1\_tarski\ X0\ X3) \wedge (k1\_funct\_1\ (k7\_trees\_2\ X1\ X0\ X2)\ X3 = k1\_funct\_1\ X1\ X3)) \wedge (\forall X4.(m2\_finseq\_1\ X4\ k5\_numbers) \Rightarrow (\neg(X4 \in k9\_xtuple\_0\ X2) \wedge ((X3 = k8\_finseq\_1\ k5\_numbers\ X0\ X4) \wedge (k1\_funct\_1\ (k7\_trees\_2\ X1\ X0\ X2)\ X3 = k1\_funct\_1\ X2\ X4)))))))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Leftrightarrow (m1\_finseq\_1\ X1\ X0) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge (v1\_trees\_1\ X0)) \Rightarrow (\forall X1.(m1\_trees\_1\ X1\ X0) \Leftrightarrow (m1\_subset\_1\ X1\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_finseq\_1\ X1\ X0)\wedge(m1\_finseq\_1\ X2\ X0))\Rightarrow(k8\_finseq\_1\ X0\ X1\ X2 = k7\_finseq\_1\ X1\ X2) \tag{6}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v3\_trees\_2\ X0)))\Rightarrow((\neg v1\_xboole\_0\ (k9\_xtuple\_0\ X0))\wedge(v1\_trees\_1\ (k9\_xtuple\_0\ X0))) \tag{7}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge(v1\_trees\_1\ X0))\Rightarrow(\forall X1.\ (m1\_trees\_1\ X1\ X0)\Rightarrow(m2\_finseq\_1\ X1\ k5\_numbers)) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))) \tag{9}$$

Theorem 1

$$\forall X0.(m2\_finseq\_1\ X0\ k5\_numbers)\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v3\_trees\_2\ X1)))\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge((v1\_funct\_1\ X2)\wedge(v3\_trees\_2\ X2)))\Rightarrow((X0\in k9\_xtuple\_0\ X1)\Rightarrow(\forall X3.(m2\_finseq\_1\ X3\ k5\_numbers)\Rightarrow(\neg(X3\in k9\_xtuple\_0\ (k7\_trees\_2\ X1\ X0\ X2))\wedge((X3\in ReplSep\ (toset\ (\lambda X4:\iota.m1\_trees\_1\ X4\ (k9\_xtuple\_0\ X2)))\ (\lambda X4:\iota.X4 = X4)\ (\lambda X4:\iota.k8\_finseq\_1\ k5\_numbers\ X0\ X4))\wedge(\forall X4.(m1\_trees\_1\ X4\ (k9\_xtuple\_0\ X2))\Rightarrow(\neg(X3 = k8\_finseq\_1\ k5\_numbers\ X0\ X4)\wedge(k1\_funct\_1\ (k7\_trees\_2\ X1\ X0\ X2)\ X3 = k1\_funct\_1\ X2\ X4)))))))))$$